REMARKS

The claims have been amended as to form but not as to content. Thus, the subject matter deleted from claim 1 appears as new claim 8.

Specifically, no change is made so as to avoid the prior art because the claims already avoided the prior art.

Accordingly, reconsideration is respectfully requested, for the rejection of the claims as unpatentable over NEWSAM 4,504,346 in view of PARENTE et al. 6,176,964 and LAVERY GB 2 122 540, or further in view of OHLIGER et al. 6,451,241.

NEWSAM discloses a process for production of an acoustic panel constituted by a cellular layer 11 flanked on one side by a reflector 12 and on the other side by a porous layer 13 with two components, respectively with acoustic properties 14 and with structural properties 15.

The process consists in carrying out the following steps:

A first step is shown in Figure 4, wherein first of all there is produced the layer 13 with two components (14, 15). To this end, on a base plate 20 are disposed the porous cloth 14 with acoustic function, then the cloth 15 of pre-impregnated fibers with open meshes to perform a structural function, then the technical layers 21-23 necessary for compacting under vacuum

with the help of a bladder 24 carried by and sealed to the plate 20.

The assembly is placed under vacuum and heated so as to produce partial carrying of the resin connecting the cloths 14 and 15.

Then the bonded cloths 14, 15 are withdrawn (column 3, lines 31, 32) from the compacting device of Figure 4 to be subjected to post-carrying.

This assembly is then connected to the cellular layer 11 with the interposition of an adhesive film. Finally, the reflector 12 is glued to the free surface of the layer 11.

The present invention differs from the NEWSAM invention as to the following two important points:

1. The final panel of NEWSAM has as the layer exposed to aerodynamic flow, the acoustic layer 14 which is fragile and thin (278 microns, as pointed out in column 2, line 20).

This type of panel is criticized in the introductory portion of the present application (see page 4, line 20 to page 5, line 22).

In this introductory material, the panel described in GB 2 130 963 is identical to that of NEWSAM.

The drawbacks of such panel, particularly the risk of delamination of the resistive layer, are set forth.

In the present application, this risk of delamination is avoided by the fact that the acoustic layer (1b) is disposed between the cellular layer and the structural surface layer (1a).

2. The process of production of the panel of the present invention is quite different.

First of all, it is capable of producing panels of complex shape, in particular with three-dimensional curves that can be quite sharp and particularly the monobloc panels of generally annular shape, such as those adapted for the intake and outlet of the fan channel of aircraft nacelles.

This is why, according to the invention, there is placed on a mold of suitable shape for the panel to be obtained, successively all the constituent elements of the panel.

Thus, in the first step of the process as defined in claim 1, there is emplaced and formed on the mold, all the structural layer (1a) of the future panel.

NEWSAM does not emplace and shape one after the other successively all the respective layers 14, 15, 11 and 12 of the panel of NEWSAM'S Figure 1.

The bi-component layer 13 is separately produced, on a base plate 20, and then hardened. NEWSAM does not teach placing and forming the layer 13 on the mold with the shape of the final panel. The layer 13 being hardened before its assembly with the other elements of the panel, it would be very difficult, even

impossible, to place the layer 13 shape matingly on a mold with the form of the final panel to be obtained. The NEWSAM process does not permit or suggest producing annular monobloc panels with complex shape that can have sharp curvatures, nor does NEWSAM teach any way in which this can be done.

PARENTE corresponds to EP 0 911 803, also recited in the preamble of the present application.

As emphasized in this preamble (page 6, line 21 to page 8, line 5), the process of PARENTE has the principal drawback of the separate fabrication of the metallic sheet 16 and its piercing, before its emplacement and shaping on the other components (15, 14, 12) of the panel. The passages from page 7, line 15 to page 8, line 2 of the present application emphasize the drawbacks of such a production procedure, due to the necessity of locally deforming the sheet 16 to give it the convexity or concavity that is desired, which will modify the area of the holes and hence the amount of local porosity of the sheet 16.

Such shaping is moreover difficult because sheet 16 is rigid.

Moreover, the sheet 16 being metallic risks giving rise to problems of corrosion.

Finally, the technique disclosed by LAVERY (GB 2 122 540) is similar to that of NEWSAM.

The surface layer of LAVERY is a wire mesh 14 (Figure 1) or 33 (Figure 3) identical to the porous cloth 14 of NEWSAM, and the structural layer 13 (Figure 1) or 34 (Figure 3) is analogous to the cloth 15 of NEWSAM.

The production of the panel 10 of Figure 1 of LAVERY is quite identical to that of the panel 10 of Figure 1 of NEWSAM. The assembly 13, 14 or 33, 34 of LAVERY is first of all produced and hardened in an autoclave, as in NEWSAM, and then removed from the autoclave (column 3, lines 95, 96) to be assembled to a porous layer 12 and to a reflector 11 (column 3, lines 123-126). The drawbacks and criticisms concerning NEWSAM apply identically to LAVERY.

None of these three prior art documents (NEWSAM, PARENTE or LAVERY) discloses or suggests the emplacement and direct shaping on a same mold having the shapes and dimensions of the final panel to be obtained, all the components of the panel, by starting with the structural layer 1a, then the porous acoustic layer 1b, then the porous layer 2 and finally the reflector 3.

This process permits (see page 11, line 22 to page 12, line 10 of our application):

- producing by draping, winding or wrapping, a structural layer 1a matching very faithfully the surface which

can have any desired curvature, of the mold, whilst preserving with good homogeneity the amount of porosity;

- locally adapting a desired quantity of porosity of the layer 1a by causing the spacing of the filaments to vary when these latter are emplaced by winding or draping.

The process of the invention also permits, as set forth in claim 3, producing the structural layer 1a in the form of a composite perforated sheet. To this end, after emplacement by draping, winding or wrapping, of the layer 1a on the mold, this layer is hardened, then pierced in situ. The quantity of porosity can be controlled perfectly because the holes are made on the emplaced sheet having its final form on the mold. After perforation, the other constituents (1b, 2, 3) of the sheet (1a) remain on the mold.

It is to be noted that OHLIGER does not disclose piercing the sheet 82 in place on the mold 84.

The sheet 82 of OHLIGER is pierced and cut out flat (Figures 4 and 7) and then shaped by heating on the mold 84 (Figure 8).

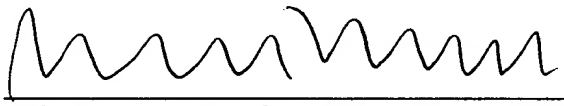
This process inevitably gives rise to local distortions of the holes provided in the sheet and hence, inhomogeneities of the porosity of the sheet 82, which is prejudicial to its effectiveness in terms of acoustic attenuation.

As the claims now in the case bring out these distinctions with ample particularity, it is believed that they are all patentable, and reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. §1.16 or under 37 C.F.R.§1.17.

Respectfully submitted,

YOUNG & THOMPSON



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